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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,048	07/30/2004	Masayuki Orihashi	P25670	2146
7055	7590	03/13/2008	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				KANE, CORDELIA P
ART UNIT		PAPER NUMBER		
2132				
			NOTIFICATION DATE	
			DELIVERY MODE	
			03/13/2008	
			ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/502,048	ORIHASHI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	CORDELIA KANE	2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 July 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-12 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 30 July 2004 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1.) Certified copies of the priority documents have been received.  
 2.) Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3.) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/2/04, 4/25/05</u> .  | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

1. This action is responsive to the non-provisional application filed on July 30, 2004. Claims 1 – 12 are pending. Claims 1, 9 and 12 are independent.

### ***Specification***

2. The disclosure is objected to because of the following informalities: The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

3. Claim 11 is objected to because of the following informalities: second data is referred to however there is no second data in the parent claim. For the purposes of examination it is assumed first data was the intended term. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 4, 6, and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 recites the limitation "for each channel" in claim 1. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 6 recites the limitation "the auto-correlation function" in claim 5. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 11 recites the limitation "second data" in claim 9. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1 – 5, 9, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Townsend's US Patent 5,675,648. Referring to claims 1 and 12, Townsend teaches:
  - a. Estimating a propagation environment using a signal transmitted from a communicating party (column 3, lines 33-35).
  - b. Acquiring first data using an estimation value obtained in the propagation environment estimating section (column 1, lines 47-48).
10. Referring to claim 2, Townsend teaches decoding a received signal using the first data acquired (column 1, lines 50-51).
11. Referring to claim 3, Townsend teaches:
  - c. Encoding the estimation value obtained in the propagation environment estimating section (column 3, lines 33-37).

- d. Acquiring the first data from an encoding pattern of the estimation value (column 3, lines 64-67).
- 12. Referring to claim 4, Townsend teaches comparing the estimation value obtained for each channel with one another, wherein based on the comparison result acquiring the first data (column 3, lines 62-67).
- 13. Referring to claim 5, Townsend teaches:
  - e. Storing a reference signal known between the apparatus and the communicating party, wherein the propagation environment estimating section obtains the correlation of the reference signal and the signal and generates a delay profile as the estimation value (column 4, lines 17-21).
  - f. The first data acquiring section uses a reference table that associates the delay profile with the first data, and reads out first data associated with the delay profile generated in the propagation environment estimating section from the reference table to acquire the first data (column 4, lines 24-27).
- 14. Referring to claim 9, Townsend teaches:
  - g. A first communication apparatus comprising:
    - i. A propagation environment control section that controls a propagation environment in transmitting a signal (column 3, lines 26-33).
    - ii. A transmitting section that transmits the signal in the propagation environment controlled in the propagation environment control section (column 3, lines 4-8).
  - h. A second communication apparatus comprising:

- iii. A first propagation estimating section which receives the signal transmitted from the first communication apparatus, and estimates a propagation environment using the signal (column 3, lines 33-35).
- iv. A first data acquiring section that acquires first data using an estimation value obtained in the first propagation environment estimating section (column 1, lines 47-48).

15. Referring to claim 11, Townsend teaches:

- i. A coding section that encodes data using the estimation value obtained in the first propagation environment estimating section (column 3, lines 28-30).
- j. A modulation section that modulates data (column 3, lines 28-30).
- k. A transmitting section that transmits data (column 3, lines 4-8).

### ***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

18. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend as applied to claims 1 and 5 above, and further in view of Southworth et al's US Patent 4,514,753. Townsend discloses all the limitations of the parent claim. Townsend does not explicitly disclose performing orthogonal conversion on the delay profile. However, Southworth discloses orthogonally converting signals to eliminate high frequency color subcarrier component (column 1, lines 45-50). Townsend and Southworth are analogous art because they are from the same field of endeavor, signals. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Townsend and Southworth before him or her, to modify the delay of Townsend to include the orthogonal conversion of Southworth. The suggestion/motivation for doing so would have been to eliminate high frequency color subcarrier component (column 1, lines 45-50).

19. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend as applied to claim 1 above, and further in view of Lender et al's US Patent 3,633,105. Townsend discloses all the limitations of the parent claim. Townsend does not explicitly disclose equalizing the received signal based on the estimation value to acquire second data. However, Lender discloses equalizing signals to correct for the distortion effects of the transmission channel (column 1, lines 5-10). Townsend and Lender are analogous art because they are from the same field of endeavor, signals. At the time of the invention, it would have been obvious to one of ordinary skill in the art,

having the teachings of Townsend and Lender before him or her, to modify the system of Townsend to include the equalization of Lender. The suggestion/motivation for doing so would have been to correct for the distortion effects of the transmission channel (column 1, lines 5-10).

20. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend as applied to claim 9 above, and further in view of Fries US Patent 3,671,967. Townsend discloses all the limitations of the parent claim as well as estimating the propagation environment using a signal transmitted from the second communications apparatus (column 2, lines 9-17). Townsend does not explicitly disclose a plurality of antenna elements wherein the transmitting section performs weighting on a transmission signal for each of the antenna elements in such a way that enables only a specific second communications apparatus to acquire the first data. However, Fries discloses weighting the transmission to be received by a specific receiver (column 10, lines 40-46). Townsend and Fries are analogous art because they are from the same field of endeavor, signals. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Townsend and Fries before him or her, to modify the transmission of Townsend to include the weighting of Fries. The suggestion/motivation for doing so would have been to be sure which receiver receives the signal.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CORDELIA KANE whose telephone number is (571)272-7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cordelia Kane/  
Examiner, Art Unit 2132

/Benjamin E Lanier/  
Primary Examiner, Art Unit 2132